Core Values

Team Number _____

Judging Room _____

Directions: For each skill area, clearly mark the box that best describes the team's accomplishments. If the team does not demonstrate skill in a particular area, then put an 'X' in the first box for Not Demonstrated (ND). Please provide as many written comments as you can to acknowledge each team's hard work and to help teams improve. *When you have completed the evaluation, please circle the team's areas of strength.*

Inspiration

	Beginning	Developing	Accomplished	Exemplary
Discovery	Balanced emphasis on all three aspects (Robot, Project, Core Values) of *FIRST* LEGO League; it's not just about winning awards			
ND	emphasis on only one aspect; others neglected	emphasis on two aspects; one aspect neglected	emphasis on all three aspects	balanced emphasis on all three aspects
Team Spirit	Enthusiastic and fun expression of the team identity			
ND	minimal enthusiasm AND minimal identity	minimal enthusiasm OR minimal identity	team is enthusiastic and fun; clear identity	team engages others in their enthusiasm & fun; clear identity
Integration	Application of *FIRST* LEGO League values and skills outside *FIRST* LEGO League (ability to describe current and potential examples from daily life)			
ND	team does not apply values and skills outside *FIRST* LEGO League	team able to describe at least one example	team able to describe multiple examples	team able to describe multiple examples, incl. individual stories

Comments:

Teamwork

Effectiveness	Problem solving and decision making processes help team achieve their goals			
ND	team goals AND team processes unclear	team goals OR team processes unclear	clear team goals and processes	clear processes enable team to accomplish well defined goals
Efficiency	Resources used relative to what the team accomplishes (time management, distribution of roles and responsibilities)			
ND	limited time management AND unclear roles	limited time management OR unclear roles	excellent time management and role definition allows team to accomplish most goals	excellent time management and role definition allows teams to accomplish all goals
Kids Do the Work	Appropriate balance between team responsibility and coach guidance			
ND	limited team responsibility AND excessive coach guidance	limited team responsibility OR excessive coach guidance	Good balance between team responsibility and coach guidance	team independence with minimal coach guidance

Comments:

Gracious Professionalism®

Inclusion	Consideration and appreciation for the contributions (ideas and skills) of all team members, with balanced involvement			
ND	unbalanced team involvement AND lack of appreciation for contributions	unbalanced team involvement OR lack of appreciation for contributions	balanced team involvement AND appreciation for contributions of most team members	balanced team involvement AND appreciation for contributions of all team members
Respect	Team members act and speak with integrity so others feel valued-- especially when solving problems or resolving conflicts			
ND	not evident with majority of team members	evident with majority of team members	almost always evident with all team members	always evident, even in the most difficult situations
Coopertition®	Team competes in the spirit of friendly competition and cooperates with others			
ND	not evident with majority of team members	evident with majority of team members	almost always evident with all team members	always evident, even in difficult situations--and team actively helps other teams

Comments:

Strengths:	**Inspiration**	**Teamwork**	**Gracious Professionalism®**

Project

Team Number _____

Judging Room_____

Directions: For each skill area, clearly **mark the box that best describes the team's accomplishments.** Teams should demonstrate everything at the level; if they are missing part, mark the level below. If the team does not demonstrate an area, put an 'X' in the first box for Not Demonstrated (ND). Please provide as many written comments as you can to acknowledge each team's hard work and to help teams improve. *When you have completed the evaluation, please circle the team's areas of strength.*

Research

	Beginning	Developing	Accomplished	Exemplary
Problem Identification *	Clear definition of the problem being studied			
ND	unclear; few details	partially clear; details missing	mostly clear; detailed	clear; very detailed
Sources of Information	Quality and variety of data/evidence and sources cited			
ND	minimal quality; variety limited	quality OR variety need improvement; did not include professional(s)	sufficient quality and variety; included professional(s)	extensive quality and variety; included multiple professionals
Problem Analysis	Depth to which the problem was studied and analyzed by the team, including extent of analysis of existing solutions			
ND	minimal study; no analysis	minimal study; some analysis	sufficient study and analysis	extensive study and analysis

Comments

Innovative Solution

Team Solution*	Clear explanation of the proposed solution and description of how it solves the problem			
ND	difficult to understand	some parts confusing	understandable	easy to understand by all
Innovation	Degree to which the team's solution makes life better by improving existing options, developing a new application of existing ideas, or solving the problem in a completely new way.			
ND	existing solution/application	solution/application contains some original element(s)	original solution/application; potential added value	original solution/application; demonstrated added value
Solution Development	Systematic process used to select, develop, evaluate, test, and improve the solution (Implementation could include cost, ease of manufacturing, etc.)			
ND	process AND explanation need improvement	process OR explanation need improvement	systematic process included evaluation	systematic process included evaluation; implementation considered

Comments

Presentation

Sharing*	Degree to which the team shared their Project before the tournament with others who might benefit from the team's efforts			
ND	shared with family / friends	shared outside family / friends (such as classmates)	shared with one audience who may benefit OR one professional	shared with multiple audiences who may benefit OR multiple professionals
Creativity	Imagination used to develop and deliver the presentation			
ND	minimally engaging OR unimaginative	engaging OR imaginative	engaging AND imaginative	very engaging AND exceptionally imaginative
Presentation Effectiveness	Message delivery and organization of the presentation			
ND	unclear OR disorganized	partially clear; minimal organization	mostly clear; mostly organized	clear AND well organized

Comments

Strengths:	**Research**	**Innovative Solution**	**Presentation**

*Required for Award Consideration

Robot Design

Team Number _____

Judging Room _____

Directions: For each skill area, clearly mark the box that best describes the team's accomplishments. If the team does not demonstrate skill in a particular area, then put an 'X' in the first box for Not Demonstrated (ND). Please provide as many written comments as you can to acknowledge each team's hard work and to help teams improve. *When you have completed the evaluation, please circle the team's areas of strength.*

Mechanical Design

	Beginning	Developing	Accomplished	Exemplary
Durability	Evidence of structural integrity; ability to withstand rigors of competition			
ND	quite fragile; breaks a lot	frequent or significant faults/repairs	rare faults/repairs	sound construction; no repairs
Mechanical Efficiency	Economic use of parts and time; easy to repair and modify			
ND	excessive parts or time to repair/modify	inefficient parts or time to repair/modify	appropriate use of parts and time to repair/modify	streamlined use of parts and time to repair/modify
Mechanization	Ability of robot mechanisms to move or act with appropriate speed, strength and accuracy for intended tasks (propulsion and execution)			
ND	imbalance of speed, strength and accuracy on most tasks	imbalance of speed, strength and accuracy on some tasks	appropriate balance of speed, strength and accuracy on most tasks	appropriate balance of speed, strength and accuracy on every task

Comments:

Programming

	Beginning	Developing	Accomplished	Exemplary
Programming Quality	Programs are appropriate for the intended purpose and would achieve consistent results, assuming no mechanical faults			
ND	would not achieve purpose AND would be inconsistent	would not achieve purpose OR would be inconsistent	should achieve purpose repeatedly	should achieve purpose every time
Programming Efficiency	Programs are modular, streamlined, and understandable			
ND	excessive code and difficult to understand	inefficient code and challenge to understand	appropriate code and easy to understand	streamlined code and easy for anyone to understand
Automation/Navigation	Ability of the robot to move or act as intended using mechanical and/or sensor feedback (with minimal reliance on driver intervention and/or program timing)			
ND	frequent driver intervention to aim AND retrieve robot	frequent driver intervention to aim OR retrieve robot	robot moves/acts as intended repeatedly w/ occasional driver intervention	robot moves/acts as intended every time with no driver intervention

Comments:

Strategy & Innovation

	Beginning	Developing	Accomplished	Exemplary
Design Process	Ability to develop and explain improvement cycles where alternatives are considered and narrowed, selections tested, designs improved (applies to programming as well as mechanical design)			
ND	organization AND explanation need improvement	organization OR explanation need improvement	systematic and well-explained	systematic, well-explained and well-documented
Mission Strategy	Ability to clearly define and describe the team's game strategy			
ND	no clear goals AND no clear strategy	no clear goals OR no clear strategy	clear strategy to accomplish the team's well defined goals	clear strategy to accomplish most/all game missions
Innovation	Creation of new, unique, or unexpected feature(s) (e.g. designs, programs, strategies or applications) that are beneficial in performing the specified tasks			
ND	original feature(s) with no added value or potential	original feature(s) with some added value or potential	original feature(s) with the potential to add significant value	original feature(s) that add significant value

Comments:

Strengths: **Mechanical Design** **Programming** **Strategy & Innovation**

Team #: _____ Referee: _____

Round: _____ Table: _____

(please circle one selection for each item)

1 **M01 – SPACE TRAVEL**

(For each roll, cart must be independent by the time it reaches first track connection)

Vehicle Payload rolled past first track connection — No Yes

Supply Payload rolled past first track connection — No Yes

Crew Payload rolled past first track connection — No Yes

2 **M02 – SOLAR PANEL ARRAY**

Both Solar Panels are angled toward the same Field — No Yes

Your Solar Panel is angled to other team's Field — No Yes

3 **M03 – 3D PRINTING**

2x4 Brick is ejected — No Yes

(due only to a Regolith Core Sample in the 3D Printer)

2x4 Brick is completely in Northeast Planet Area — No Yes

4 **M04 – CRATER CROSSING**

All weight-bearing features of crossing equipment crossed completely between towers — No Yes

All crossing equipment crossed from east to west, completely past flattened Gate — No Yes

5 **M05 – EXTRACTION**

All four Core Samples no longer touching axle of Core Site Model — No Yes

OR

Gas Core Sample touching Mat & completely in Lander's Target Circle — No Yes

Gas Core Sample is completely in Base — No Yes

Water Core Sample supported only by Food Growth Chamber — No Yes

6 **M06 – SPACE STATION MODULE**

(Inserted Modules must not touch anything except Habitation Hub)

Cone Module is completely in Base — No Yes

Tube Module is in west port of Habitation Hub — No Yes

Dock Module is in east port of Habitation Hub — No Yes

Team Initials: _____

7 **M07 – SPACE WALK EMERGENCY**

Astronaut "Gerhard" is in the Habitation Hub's Airlock Chamber: — No Partly Completely

8 **M08 – AEROBIC EXERCISE**

(If Pointer is partly covering either grey or orange end borders, select that respective color)

Exercise Pointer tip is in: — None Gray White Orange

(due only to moving one or both Handle Assemblies)

9 **M09 – STRENGTH EXERCISE**

Strength Bar lifted so that tooth-strip's 4th hole is at least partly in view — No Yes

10 **M10 – FOOD PRODUCTION**

Grey weight is dropped after green, but before tan — No Yes

(due only to moving the Push Bar)

11 **M11 – ESCAPE VELOCITY**

Spacecraft stays up — No Yes

(due only to pressing/hitting Strike Pad)

12 **M12 – SATELLITE ORBITS**

Satellites on or above the area between the two lines of Outer Orbit: — 0 1 2 3

13 **M13 – OBSERVATORY**

(If pointer is partly covering either gray or orange end borders, select that respective color)

The Observatory pointer tip is in: — None Gray White Orange

14 **M14 – METEOROID DEFLECTION**

(The Meteoroid must cross from west of the Free-Line)

(The Meteoroid must be completely independent between the hit/release and scoring position)

Meteoroids touching the Mat and in the Center Section: — 0 1 2

Meteoroids touching the Mat and in Either Side Section: — 0 1 2

15 **M15 – LANDER TOUCH-DOWN**

Lander is intact and touching the Mat — No Yes

Lander is completely in: — None Base Northeast Planet Area Target Circle

PENALTIES

Penalty discs in the southeast triangle — 0 1 2 3 4 5 6

RETURN LOOSE ITEMS

(1x) Supply Payload, (1x) Crew Payload, (1x) Vehicle Payload,
(1x) Dock Module, (1x) Cone Module, (1x) Tube Module,
(1x) Meteoroid Ring, (1x) Water Core Sample, (2x) Regolith Core Sample,
(1x) Gas Core Sample, (1x) Satellite V, (1x) Satellite C, (1x) Satellite X,
(1x) Astronaut "Gerhard", (2x) Lander Parts, (1x) 2x4 Brick,
(6x) Penalty Discs, (1x) Meteoroid Ring, (2x) Meteoroids